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10/073,623	02/11/2002	Mark N. Robins	10018045-1	4533

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EXAMINER

NGUYEN, LUONG TRUNG

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/073,623	Applicant(s) ROBINS ET AL.	
	Examiner LUONG T. NGUYEN	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/11/02</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claims 1-9, 20, 21-30 are objected to because of the following informalities:

Claim 1 (line 5), "said shutter" should be changed to --a shutter--.

Claim 1 (line 6), "with said processor" should be changed to --said processor--.

Claim 4 (lines 3-4), "between said two successive images" should be changed to -- between two successive images--.

Claim 20 (line 4), claim 30 (line 4), "said plurality of image regions" should be changed to --said plurality of regions--.

Claim 21 (line 1), claim 23 (line 3), "a current image" should be changed to --the current image--.

Claims 2-9 are objected as being dependent on claim 1.

Claims 22-30 are objected as being dependent on claim 21.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 3 (line 3) recites limitation “said main object,” it is not known this limitation refers to limitation “a main object” on lines 1-2 or “main object” on line 2.

Claim 3 (lines 1-2) recites limitation “a main object specifying a main object in said images,” this is unclear.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 10, 13, 15-21, 24-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Bell et al. (US 5,103,254).

Regarding claim 10, Bell et al. discloses an image capturing method, comprising the steps of:

detecting a shutter button (release button 76, figure 4, column 4, lines 40-45) press in order to initiate the image capturing method;

capturing a previous image (capture scene No.1 , step 102, figures 11a-11c, column 5, lines 29-62);

capturing a current image (capture scene No.2 , step 128, figures 11a-11c, column 5, lines 29-62);

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comparing said current image and one or more previous images (steps 150-152, motion detector compares pixels in the first outline with pixels in second outline, figures 11a-11c, column 5, lines 29-62);

determining if said current image is stable with regard to motion (steps 164-168, figures 11a-11c, column 5, lines 29-62);

converting said current image to be said previous image and repeating the step of capturing a new image as said current image and repeating the steps of comparing and determining if said current image is not stable (figures 11a-11c, column 5, lines 29-62);

wherein the step of capturing a current image and the steps of comparing and determining are repeated until said current image is determined to be stable (figures 11a-11c, column 5, lines 29-62).

Regarding claims 13, 24, Bell et al. discloses the step of waiting a predetermined image interval between image captures (step 126, (figures 11a-11c, column 5, lines 29-62).

Regarding claims 15, 25, Bell et al. discloses wherein the step of comparing compares all pixels in said current image and in said previous image (steps 150-152, motion detector compares pixels in the first outline with pixels in second outline, figures 11a-11c, column 5, lines 29-62).

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Regarding claims 16, 26, Bell et al. discloses the step of comparing a predetermined sampling pattern of pixels (block in figure 5b, 5c, 11a-11c) in said current image and in said previous image.

Regarding claims 17, 27, Bell et al. discloses the step of comparing a predetermined region (block in figure 5b, 5c, 11a-11c) in said current image and in said previous image.

Regarding claims 18, 28, Bell et al. discloses the step of comparing compares a user-designated region in said current image and in said previous image (comparing desired portions of the images, column 5, lines 50-63).

Regarding claims 19, 29, Bell et al. discloses the step of comparing compares a user-designated object in said current image and in said previous image (comparing desired portions of the images, column 5, lines 50-63).

Regarding claims 20, 30, Bell et al. discloses wherein the step of comparing compares a plurality of regions in said current image to a corresponding plurality of regions in said previous image, and wherein said current image is determined to be stable when all regions in said plurality of image regions are determined to be stable (steps 150-152, motion detector compares pixels in the first outline with pixels in second outline, figures 11a-11c, column 5, lines 29-62).

Regarding claim 21, all the limitations are contained in claim 20; therefore, see examiner's comments regarding claim 20.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 4-9, 11-12, 14, 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell et al. (US 5,103,254).

Regarding claim 1, 7, 8, Bell et al. discloses an image capturing device, comprising:
an electronic image sensor (image sensor 40, figure 4, column 4, lines 25-30);
a memory (included in system controller 74 for operating the flow chart in figures 11a-11c) including a motion detect routine, a predetermined image interval, and at least one predetermined motion threshold ; and
a processor (system controller 74, figures 4, 6, 11a-11c, column 4, line 25 – column 5, line 67) communicating with said electronic image sensor, a shutter button (release button 76, figure 4, , and said memory, said processor conducting the capturing of images separated by said predetermined image interval, comparing a current image to one or more previous images, determining when motion between said current image and said previous image is below said at least one predetermined motion threshold.

Bell et al. fails to specifically disclose storing said current image as a final image. However, Bell et al. discloses memory 68 (figure 4, column 4, lines 25-35) for storing captured image, and Bell et al. also discloses that if no motion occurred over the measurement interval, the two images are match (i.e., there is no blur, the image is sharp, column 5, lines 55-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store the current image as final image. Doing so, the stored image has a good quality.

Regarding claim 2, Bell et al. discloses a predetermined sampling pattern of pixels (block in figure 5b, 5c) to be sampled in a captured image and wherein a comparison is performed on pixels included in said predetermined sampling pattern .

Regarding claim 4, Bell et al. discloses a number of regions data dividing a captured image into a plurality of image regions and wherein a region-by-region comparison is performed between two successive images (figure 5b-5c, 11a-11c).

Regarding claim 5, Bell et al. discloses a motion detect variable (threshold N_{min} , step 164, figure 11c), wherein a motion detection is performed when said motion detect variable is set to an enable state (when $N > N_{min}$, a motion is detected, steps 164, 168, figure 11c).

Regarding claim 6, Bell et al. discloses said predetermined motion threshold is user-settable (the threshold N_{min} in step 164, figure 11c is user-settable).

Regarding claims 9, 12, 23, Bell et al. discloses a hold timeout timer that stores a predetermined hold timeout period and wherein said current image is stored as a final image if said hold timeout timer expires (wait for time interval, step 126, figures 11a).

Regarding claims 11, 14 and 22, Bell et al. fails to specifically disclose storing said current image as a final image. However, Bell et al. discloses memory 68 (figure 4, column 4, lines 25-35) for storing captured image, and Bell et al. also discloses that if no motion occurred over the measurement interval, the two images are match (i.e., there is no blur, the image is sharp, column 5, lines 55-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store the current image as final image. Doing so, the stored image has a good quality.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Van Heyningen et al. (US 4,949,117) discloses camera.

Harigaya et al. (US 5,583,791) discloses recording-reproduction apparatus.

Gillespie (US 5,619,258) discloses image stability telecines.

Koyanagi et al. (US 6,125,145) discloses motion detection apparatus and motion detection method.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID L. OMETZ can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN
3/20/06



LUONG T. NGUYEN
PATENT EXAMINER